

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 13.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-007753**Date Inspected:** 10-Jul-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Oregon Iron Works Clackamas, Or.**Location:** Clackamas, OR**CWI Name:** Steve Barnett**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Hinge-K Components**Summary of Items Observed:**

Summary of Items Observed: On this date, Caltrans Quality Assurance Inspector (QA) Clete Henke was present at Oregon Iron Works, Inc. (OIW) in Clackamas, OR for observation of fabrication of the Hinge K Pipe Beams and related activities including in process welding and OIW Quality Control (QC) visual and nondestructive testing. The following observations were recorded:

OIW Fabrication Shop-Bay 3

Hinge-K Pipe Beam Fuse Sub-Assembly 120A-8:

a125 stiffener ring to a124-8 Fuse

The QA Inspector performed 100% Visual Inspection (VT) and 10% Magnetic Particle Testing (MT) verification at completed Partial Joint Penetration (PJP) weld joints designated WM3-12, WM3-13, WM3-14, WM3-15, WM3-16 & WM3-17. The referenced connections join a125 stiffener rings with a124-8 fuse section. After VT and MT verification, the QA Inspector determined that the connections noted above appeared to be in general compliance with the contract requirements. Please reference TL-6028 report for this date for further details.

Hinge-K Pipe Beam Fuse Assembly 120A-2:

a124-3 to a124-11

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Fuse Assembly 120A-5:

a124-14 to a124-2

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

Hinge-K Pipe Beam Fuse Sub-Assembly 120A-6:

A124-9 to a124-1

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Fuse Sub-Assembly 120A-7:

A124-5 to a124-15

The QA Inspector noted upon arrival that Inside Diameter (ID) side of circumferential weld joint WM3-18 had been completed and back-gouged from the outside. OIW welder John Tellone (WID T23) was observed grinding the back-gouged location in an attempt to achieve a weldable profile in preparation for initiation of the Outside Diameter (OD) side of the Complete Joint Penetration (CJP) weld. Welder T23 was engaged in the activity described above for the duration of the day shift. At the onset of swing shift, OIW welder Bounheune Savahn (WID S74) was observed continuing grinding and was still engaged with this activity at 1530 hrs when the QA Inspector departed.

Hinge-K Pipe Beam Base Assembly 102A-1:

a111-1 forging to a110-4 base plate

The QA Inspector intermittently observed OIW welder Rick Hinkle (WID H49) during in-process tack welding at multiple stiffeners on the base assembly 102A-1. Tack welding was performed utilizing Flux Cored Arc Welding (FCAW) in the vertical (3F) position in accordance with approved. Tack welding at the locations referenced above appeared to be in general compliance with approved contract documents.

Hinge-K Pipe Beam Base Assembly 102A-4:

a111-4 forging to a110-4 base plate

The QA Inspector intermittently monitored OIW welders Tim O'Brien (WID O6) on day shift and Bui Liem (WID B10) on swing shift during in progress Submerged Arc Welding (SAW) at weld joints W1-61, W1-57 & W1-53(O6) and W1-49(B10). The referenced connections join a107 and b106 stiffeners. The QA Inspector intermittently observed as welders T23 & B10 deposited SAW passes in the horizontal (2F) position in accordance with approved welding procedure. The QA Inspector noted the OIW welders were maintaining continuous preheat utilizing a torch. Referenced connections W1-61, W1-57 & W1-53 were completed during the day shift and W1-49 was in-process at 1530 hrs when the QA Inspector departed. The QA Inspector observed OIW QC Inspectors Jose Salazar and Steve Barnett regularly monitoring and recording the in process SAW parameters during day and swing shift respectively. The QA Inspector also intermittently observed in process welding parameters and determined that the SAW parameters and minimum preheat/interpass temperature appeared to be in general compliance with the contract requirements -- (W1-57: 35 volts, 585 amperes, 508mm/min travel speed).

Hinge-K Pipe Beam Fuse Assembly 120A-3:

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

OIW Fabrication Shop-Bay 6

Hinge-K Pipe Beam Fuse Assembly 120A-4:

a124-13 to a124-4

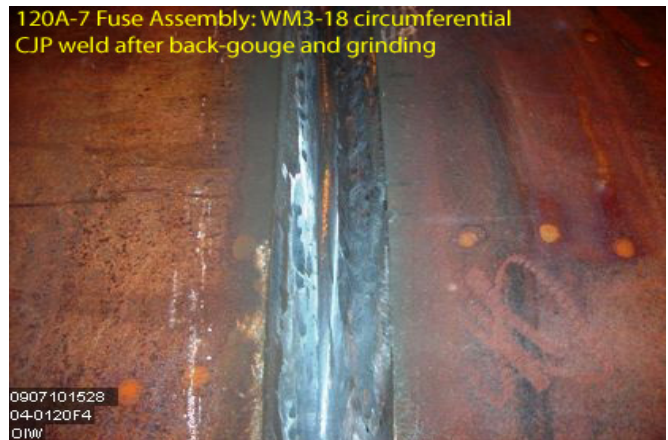
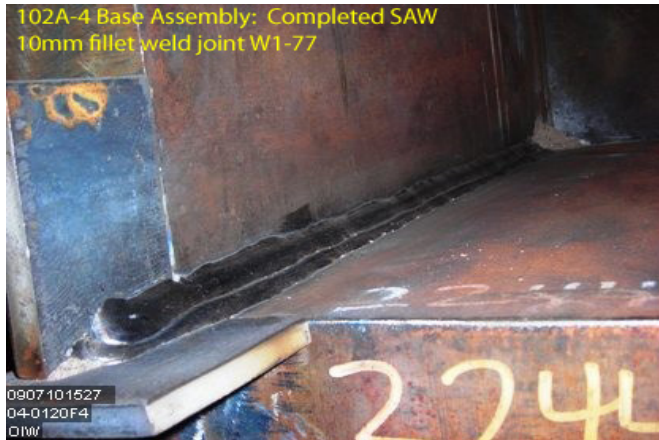
The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Material, Equipment, and Labor Tracking:

The QA Inspector performed verification of personnel involved with this project and equipment in use. The QA Inspector accounted for 3 OIW production personnel and 1 Quality Control Inspector present on this date during day shift and 2 OIW production personnel and 1 Quality Control Inspector present during swing shift.



Summary of Conversations:

As noted in the body of the report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916) 813-3677 , who represents the Office of Structural Materials for your project.

Inspected By:	Henke,Clete	Quality Assurance Inspector
Reviewed By:	Adame,Joe	QA Reviewer
